

## **Ordinance (Operating Permit) Summary / Process**

The City of Trinidad Draft OWTS Ordinance provides the legal framework for implementing a City OWTS Management Program. This Ordinance is supplemented with detailed Definitions, Guidelines and Regulations. The Draft Ordinance incorporates aspects of existing ordinance requirements for the design, construction and alteration of OWTS already in effect (Sewage Disposal Permits). In addition, it creates an Operating Permit system that will require all systems in the City to be regularly inspected and maintained; everyone owning an OWTS will be required to possess a valid operating permit.

While the Ordinance provides the legal framework and minimum requirements for the entire program, the Guidelines provide further guidance for implementing the ordinance. These can be amended more easily to adapt to different situations than the Ordinance. The regulations (Humboldt County Sewage Disposal Regulations currently in effect) set forth design standards for constructing, modifying or repairing OWTS, such as size and location and separation from groundwater etc. These standards are ultimately dictated by the Regional Water Quality Control Board (a State agency) and will remain basically as they are now.

The purpose of this document is to provide a summary of the process that the Draft OWTS Ordinance sets forth with some examples so that it is simpler and easier to understand than how it is outlined in the Ordinance and Guidelines. This is somewhat difficult due to the amount of flexibility and individual considerations written into the ordinance. Each system will be evaluated on a case-by-case basis, so there is no 'one size fits all.' Some examples are provided below in order to aid the public in interpreting the Draft OWTS Ordinance.

### **Why – (First of all, why is the City adopting this program?)**

It is the City's goal to get all systems up to current code requirements eventually, and to correct problems with improperly functioning systems, but without creating significant hardships for residents. Current water quality testing is indicating that there is septic pollution in our local creeks and groundwater. Trinidad's OWTS program has been coordinated with the development of uniform septic regulations for the State of California in order to maintain local control of OWTS and development. In addition, the State is also adopting stricter standards for lands adjacent to Areas of Special Biological Significance, which Trinidad Bay is designated. These new State standards could mean that the City will have to construct a sewer system if septic pollution is not controlled. Therefore, the City must take a proactive approach to this problem. There are many old and unpermitted systems (> 50%) in Trinidad, most of which are of unknown status in terms of their functionality. In addition to complying with the State regulations, and protecting human health and the environment, this program will also protect your property values and the local economy of the City. If systems fail, they can be very costly (\$10,000 - \$20,000) to replace and future development could be curtailed. If

septic pollution is not controlled, it can affect the local economy (tourism and fishing) as well as require a property assessment to pay for a sewer treatment plant.

### **Operating Permits – (How will this process work?)**

1. Everyone will have to get their system inspected by a qualified service provider (e.g. Steve's Septic, Humboldt County Environmental Health staff, etc).
  - One qualified inspector charges \$150 (for Trinidad residents) for an inspection and an additional \$275 - \$500 to pump the tank if needed, depending on the size (based on 2005 figures).
2. An Inspection Report (in a form approved by the City) shall be submitted to the City.
  - The Inspection Report shall include a performance rating as to how your system is functioning (e.g. Excellent, Good, Satisfactory, Marginal, Poor, Fail).
3. Fill out an OWTS User / Owner Questionnaire and submit to the City as an application for an Operating Permit. This form will ask things about the type and amount of use of the OWTS, such as how many people living there, whether you use a garbage disposal, etc.).
  - This may sound obtrusive, but OWTS are designed for an average situation – 2 people per bedroom at 75 gallons of water use per day per person – and many people do not understand how their actions affect the health of their system. Doing several loads of laundry in a day can overload your system. Garbage disposals significantly increase the amount of solids entering the tank, requiring more frequent pumpings. Chemicals can also harm your system, such as cleansers, flushing pharmaceuticals down the toilet or using commercial OWTS additives. This type of information needs to be considered when determining an appropriate maintenance schedule for your system.
4. City staff will determine the maintenance schedule and term of your operating permit and will issue it within 30 days (see §6.02 of the Guidelines). The schedules will be developed based on the Inspection Report and OWTS Owner / User Questionnaire. Conditions will be placed on your operating permit, at a minimum specifying the required maintenance and inspection schedule. Other conditions may be placed on the permit depending on the type and performance of your system in order to protect public health and the environment, your property values and the local economy. These may include such things as limiting your water use, limiting the number of loads of laundry that may be done in a day, or prohibiting the use of a garbage disposal.
  - Your maintenance schedule will be based on the following types of information:
    - Age and condition of your system, including whether it meets current code requirements, and its performance rating (how it is functioning);
      - Older systems (specifically pre-1980, and pre-1974) and systems that are performing at a less than Satisfactory level will have a shorter inspection

- schedule than newer systems. Similarly, systems not meeting current standards will also have a shorter inspection schedule.
- Site conditions, such as the size of the lot and position of the system.
    - Systems with less than 100% reserve area, those on smaller lots, or systems that are covered with impermeable surfaces will have shorter inspection schedules.
  - The type and intensity of the use of the system relative to its design capacity (e.g. number of people living in the residence, monthly water use, etc.).
    - For example, if you have a 3 bedroom, standard system, but only 2 people living in your residence, your inspection schedule may be longer than three years depending on other factors. But, if you have an undersized system for the number of bedrooms, or people living on the property, you will have a shortened inspection schedule.
  - Appliance and water use may be considered in setting your maintenance schedule.
    - Things such as garbage disposals and laundry patterns affect the health of your OWTS and will be taken into account in the inspection schedule. Properties with low-flow, water saving appliances and lower actual water use will have longer inspection schedules than those with higher water use or those with garbage disposals.
  - Performance rating
    - If your system is performing at a level of Excellent or Good, you will have a longer term operating permit than if your system is operating at a Marginal level. Upgrades may be required if your system performs at a Poor or Fail level (see below).
5. A standard operating permit for an average system will be 3 years, but may range anywhere from 1 year for higher risk systems to a maximum of 5 years for low risk systems.
  6. The City will track maintenance scheduled and the terms of each operating permit. Each person is responsible for completing the maintenance required in the terms of their operating permit and submitting the necessary documentation to renew the permit before it expires (Step 1 and 2).
  7. If property is transferred, than a new operating permit, based on the new owner's OWTS Owner / Use Questionnaire, will need to be issued. The inspection and maintenance schedule may changed based on the questionnaire.
  8. If new development occurs (such as a building addition) then the Operating Permit and OWTS itself will have to be reevaluated.
  9. The process then repeats itself.

## Upgrades Required – (Will I have to upgrade my system?)

In order to make them more accessible and future inspections easier, all systems will be required to install risers at grade in order to access the tank if they are not in place already. All systems that don't already have them will also be required to install effluent, or in-line, filters in order to protect the leachfield. Other than that, most systems that are functioning normally (Satisfactory or better), even if the system is not up to code, will generally be allowed to remain as is until something triggers a required upgrade. Higher risk systems will be inspected and maintained on a more frequent basis in order to prevent failure or other problems rather than requiring upgrades. Conditions for use as noted above (e.g. restricting garbage disposals or water use) may also be placed on the operating permits to prevent system failure.

There are three main categories of situations where upgrades may be required: 1) at the time of property sale / transfer; 2) at the time of Building Permit / Coastal Development Permit application; and 3) if the system is functioning below a Satisfactory level.

1. When property changes hands is an ideal time to bring systems up to code as part of the sale negotiations. Upgrades will be required at the discretion of the Health Officer following the guidance of §7.01.
  - Nonconforming systems (those not meeting current code requirements) will generally have to be brought into conformance with current requirements.
  - Systems operating at a less than Satisfactory level (including Marginal and Poor, but not Fail, which must be addressed immediately) will likely require repairs or upgrades to bring it up to a functional level of Good or better.
  - Systems functioning at a Satisfactory level will be individually assessed and may require upgrades at the discretion of the Health Officer depending on other factors.
2. When someone submits a development application to make improvements on their property is another reasonable time to require upgrades of an OWTS, even if the development proposed does not increase wastewater flows. If someone is spending money to improve their property, and the septic system is not to code, or not functioning properly, then OWTS upgrades should be part of the improvements. Upgrades will be required based on the condition and functionality of the OWTS as well as the type and value of the improvements proposed (see §7.02 of the Guidelines for more information).
  - Generally the higher the value of the improvements proposed, the more OWTS modifications may be required.
  - The lower the performance rating of a system, the more likely that upgrades will be required at the time of development permit application.
  - Generally, permits for additional development (as opposed to maintenance, repairs and simple remodels of existing structures) will not be issued for systems not up to current codes, and / or systems functioning at a level of Poor.

- For projects that will increase a building's footprint, the existing system shall be evaluated, and a reserve area will be required if one is not already in place.
  - For projects that will increase the intensity of the use, or increase flows to the system, such as the addition of a bedroom, upgrades to current standards will generally be required.
3. If the results of a performance inspection reveal that a system is not functioning properly, then actions to protect public health and the environment shall be required.
- At first this may simply entail more frequent inspections and maintenance, and may also include the installation of monitoring wells on the property so that the quality of the effluent leaving the leachfield can be assessed.
  - Other measures to reduce flows to the system, such as restricting water usage or disconnecting the garbage disposal may be implemented.
  - Repairs or upgrades will be required if evidence shows that wastewater is not being adequately treated and is resulting in pollution of surface and / or groundwater. This does not necessarily mean that the system will have to be brought entirely up to code but repaired or upgraded to the point of having a Satisfactory performance rating.

### **Costs – (What will this cost me?)**

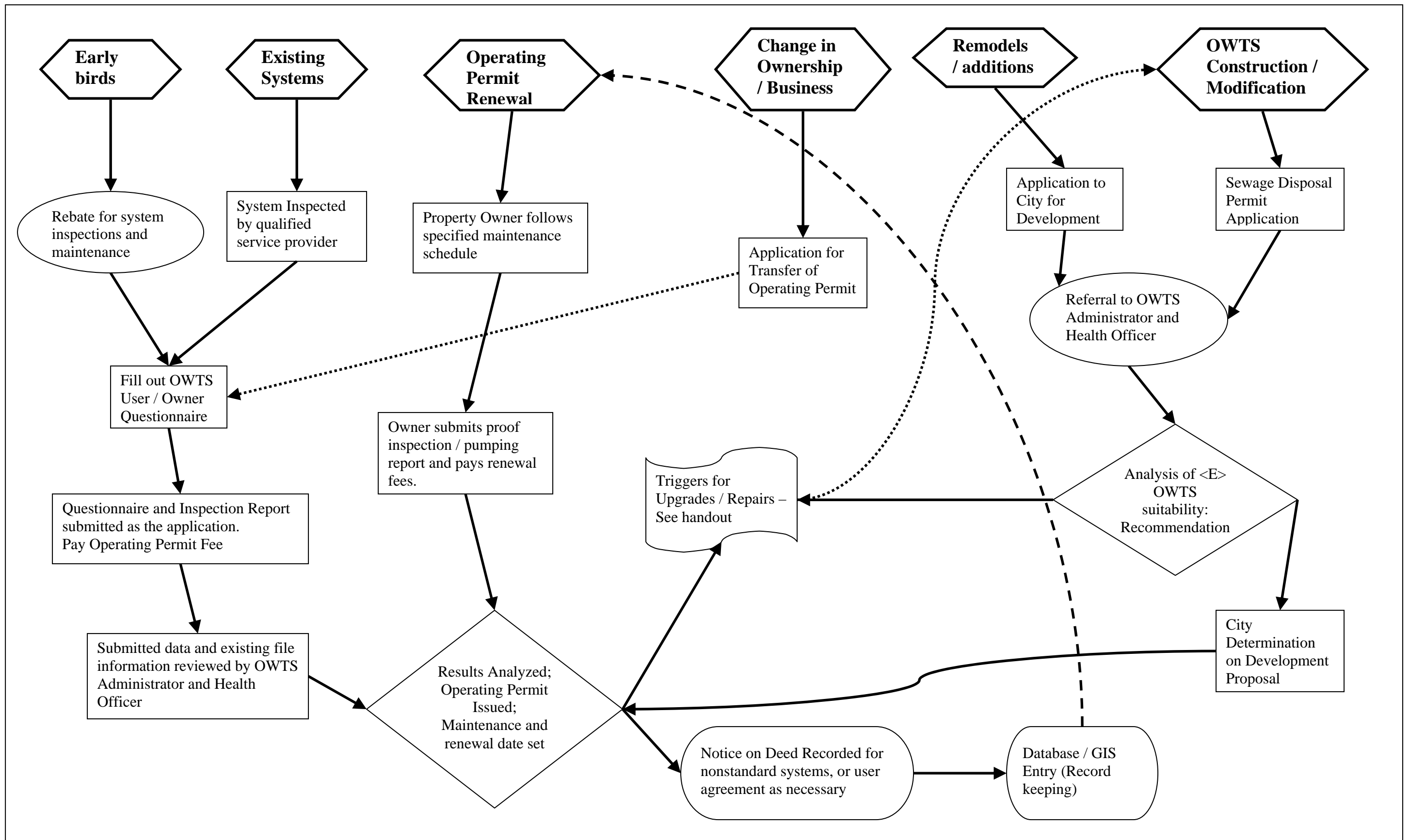
One qualified service provider has offered reduced rates (with a maintenance contract) for Trinidad residents (2006). In general, pumping will be required at or around the time of each inspection, unless the inspection reveals that there is no need to pump (in that case, if the owner elects not to pump, the inspection schedule may be shortened, depending on sludge levels) to ensure that the tank does not get overfull between inspections). The cost for an inspection and pumping ranges from \$425 - \$650 depending on the size of the system (an inspection is always \$150, and the cost of pumping varies). \*Note that the initial inspection may cost more if the system must be located and / or the access covers dug up. The fee for Operating Permits has yet to be determined, but will likely range from \$150 to \$300 (one time fee at the time of renewal). Over the average term of three years for an operating permit, that equates to somewhere between \$575 and \$950, or \$191 - \$317 per year.

When assessing the costs of this program, costs of the alternatives should also be considered. In general, this program will result in modest cost increases for residences that should avoid even larger costs in the future. Failed OWTS are very expensive to repaid, as the leachfield generally has to be completely replaced (soil and all). This affects property values and the ability to additionally develop a lot. Also consider that if the City does not control septic pollution, tourism would be affected, and the State could required the City build a sewer treatment plant. Such a plant would entail huge expenses, would put the City into significant debt for many years, which would have to be paid back by the customers over time; it would also mean more allowable development. Consider the monthly local sewer fees that most people living within City limits must pay (e.g. Arcata, Eureka, Blue Lake, Fortuna, etc.). These average \$30 per

month, which equates to \$360 per year or \$1080 over three years. As you can see, Trinidad's program is less expensive in the long run.

**Exceptions – (What if my property won't support a code system, or what if I can not afford upgrades?)**

As mentioned above, the ordinance provides for significant variability and allows the flexibility to accommodate almost any situation. Exceptions to standards are currently allowed by the Health Department, and this ordinance will allow that to continue. So much flexibility has been written into this program, that all sites and every OWTS will be evaluated individually. There is flexibility for the Health Officer and / or OWTS Administrator to work with individual property owners to come up with mutually agreeable solutions. The ordinance allows exceptions to be made for almost every requirement in cases of hardship as long as health and safety are still protected. In addition, the City has received tentative approval for (and is seeking more) grant funding to aid property owners in repairing and upgrading the worst systems on an income qualifying basis.



### **Why is Trinidad concerned about septic systems?**

Public Health and Safety: Untreated wastewater poses significant health risks. Domestic wastewater contains bacteria, viruses and nutrients that cause dysentery, hepatitis, typhoid fever and "blue baby" syndrome.

Water Quality and Environmental Health: Nutrients in wastewater pollute aquatic ecosystems and upset the natural balance of the environment. Trinidad is surrounded by sensitive natural resources that must be protected.

Community Welfare: Polluted water can affect recreational opportunities and tourism around Trinidad. Property values could decline and hurt the economic base of the community.

### **Why should you be concerned about septic systems?**

Money: Maintenance is much cheaper than repair or replacement of a failed system. Compare the cost of a typical inspection and pumping (\$650 every 3 years) to a replacement that can cost upwards of \$10,000

Money: Failed septic system decline individual property values and can result in development restrictions or block real estate transactions. Environmental degradation can result in lowered property values around the community.

Your Health: Failed or improperly functioning systems may discharge untreated waste into your yard, your neighbors yard or nearby waters.

### **Contact Numbers**

#### **Trinidad City Clerk**

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trinidadcityclerk@cox.net - email

#### **County Environmental Health Division**

445-6215

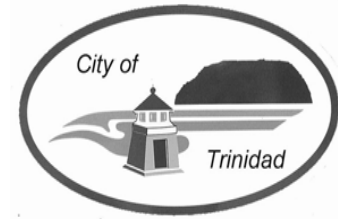
#### **Streamline Planning Consultants**

Contact: Bob Brown (City Planner)\*  
or Trevor Parker (Assistant City Planner)\*  
822-5785

### **For Further Information**

Go to the City's web page to read public education materials and to find out when and where meetings and workshops will be held.

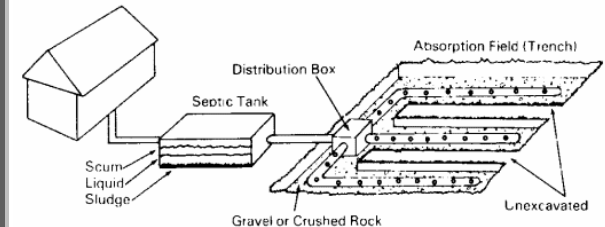
**trinidad.ca.gov**



### ***Onsite Wastewater***

### ***Treatment System***

### ***Management Program***



This pamphlet is designed to inform residents about septic system issues, and the development of Trinidad's Onsite Wastewater Treatment System Management Program.

### **Prepared by:**

Streamline Planning Consultants

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## Septic Systems in Trinidad

A septic system is an onsite wastewater treatment system (OWTS) that uses the soil to treat wastewater. A septic system has two main parts; a holding tank (septic tank) and an absorption field (leachfield). There are a variety of different types of OWTS with different accessories. In all septic systems, wastewater from toilets, sinks, showers, washing machines, home enters the septic tank. Heavier solids settle out and scum rises to the surface (see figure on front of pamphlet). The water between the scum and solid layer ultimately enters the leachfield and trickles down into the soil where biological filtration occurs.

The City of Trinidad and the surrounding areas use OWTS as the only means of wastewater disposal. The City of Trinidad has been concerned about the Onsite Wastewater Treatment Systems (OWTS), or septic systems, within the City for the last 30 years. Trinidad was subdivided by the 1950's into 8000 s.f. residential lots. As a result the OWTS are at a high density. There are a significant number of systems that are old and unpermitted and that do not meet current standards (e.g. pit systems). This puts the Trinidad area at risk for water quality and public health impacts.

In the past, OWTS were considered a temporary means of sewage disposal, with a sewage treatment plant the ultimate solution. As technology has improved, septic systems are now viewed as a permanent method of wastewater disposal as long as they are properly maintained. At this point, construction of a sewage treatment plant in the Trinidad area is unfeasible and undesirable. Therefore, the City must ensure that OWTS are adequately maintained to ensure proper wastewater treatment.

## Trinidad OWTS Management Program

The Trinidad OWTS Management Program came about as a result of community concerns and based on public input. The City's program is modeled after other community program and is appropriate for areas with high development densities and nearby sensitive resources. These include the coastal stream and the Trinidad Kelp Beds, which have been designated as a State Area of Special Biological Significance. Trinidad's program is also being developed to be consistent with the new statewide septic regulations that will be forthcoming in the next year.

There are four main elements of Trinidad's OWTS Management Program: 1) regulatory framework; 2) water quality monitoring; 3) database management / GIS; and 4) public outreach.

Regulatory Framework: A new ordinance will establish the requirement for operating permits for all OWTS within the City. Periodic inspections and proper maintenance will be required prior to issuance or renewal of operating permits.

Water Quality Monitoring: A water quality monitoring program for both surface and groundwater in and around the City is being implemented to ensure that septic systems are not degrading the environment.

Database Management / GIS: The City is using a GIS (geographic information system) to inventory and track septic systems and operating permits in the City.

Public Outreach: Landowner education is one of the most effective means of preventing septic system failures. This program has been, and will continue to be developed based on community input.

## Taking Care of Your Septic System

- Do** have your tank inspected and pumped every three years
- Do** practice water conservation. Repair drips and leaks. Use water-saving showers, toilets and faucets. Spread out loads of laundry.
- Do** use your property and septic system consistent with how it was designed. Septic systems are designed based on the number of living units and bedrooms in each unit. This assumes a certain number of people and water usage. The more strain you put on your system, the more likely it is to cause you and our community problems.
- Do** install risers and effluent filters.
- Do** know where your system is located and how it works, and doesn't work.
- Don't** drive or park or build over any part of your system.
- Don't** plant shrubs or trees over your system. Roots may clog and damage your lines or leach field.
- Don't** use your toilet as a trash can or for food disposal
- Don't** dispose of cooking oil, fats and grease in your septic system.
- Don't** use garbage disposals. The large particles put a significant additional strain on your system.
- Don't** use commercial septic system additives. At best they are harmless and a waste of money; at worst they hurt your system. They are not an alternative to regular maintenance, which is cheaper in the long run.
- Don't** make or allow any repairs to your system without the proper permits from the Health Department.
- Don't** pour hazardous household chemicals or medicine down the drain.

## **INTRODUCTION**

The City of Trinidad is currently in the process of developing an on-site wastewater treatment system (OWTS) management program. An OWTS refers to a system of sewage disposal located on the site of an individual or small group of residences. The most common type of OWTS is a septic system. Almost all residences in Trinidad utilize septic systems as their method of sewage disposal. A draft ordinance has been compiled that will serve as a basis for the program, and it is now going through the public hearing process. The purpose of the program is to protect the high quality of life that exists in Trinidad by ensuring that sewage is adequately treated and disposed of. The following will explain why the program is needed and beneficial to all involved, how it will work and what it will mean to you.

## **WHAT IS A SEPTIC SYSTEM?**

A septic system is a biological method of household sewage treatment that can be very effective when it has been carefully designed and installed and then is properly used and maintained. Septic systems are designed to provide partial treatment of the sewage, with disposal to the soil in such a manner that the sewage stays under the ground and is further treated by soil organisms so that contaminants do not reach groundwater or streams.

A septic system typically consists of a septic tank and a leaching device. The tank is usually 1000-2000 gallons in size and is designed to trap solids and grease and provide initial, primary treatment of the sewage. Treatment in the septic tank is anaerobic (without oxygen) and produces a fairly raw effluent that is still very high in bacteria and pathogens, dissolved solids and organics, ammonia, and organic nitrogen. The liquid then typically flows by gravity to the leaching device where the sewage soaks into the soil and most of the treatment takes place. The total size of tank and leaching area needed is determined by the expected amount of sewage flow into the system and capabilities of the soil to absorb water. Solids settle to the bottom of the tank and must be periodically pumped out by a qualified pumper before they build up and get into the leach lines. If this happens, the solids will clog the system and cause its failure.

Good treatment is primarily a biological process and it occurs most rapidly in upper soil layers that are rich in soil organisms and with plenty of oxygen to provide aerobic treatment. Besides the basic tank and trench leaching device, an onsite sewage disposal system may include other components such as a pump if the leachfield is higher than the tank. Other types of alternative OWTS include Wisconsin Mounds and Intermittent Sand Filters. These however generally do not occur in Trinidad because they are only used when conditions will not permit a conventional septic system; these conditions do not exist in Trinidad. Any other OWTS besides septic systems will likely have different, but as yet undetermined standards. Cesspools and pit privies are old methods of sewage disposal that are now prohibited by the North Coast Regional Water Quality Control Board.

## **HOW DID THIS PROGRAM COME ABOUT?**

The City has been considering this project for many years, discussing it at Planning Commission meetings and Town Hall meetings. A general town hall meeting was held in

1997, and residents in attendance indicated a concern about the situation of septic systems within the City. Therefore, there was another town hall meeting regarding septic systems on October 29, 1998. This meeting resulted in a general consensus by the public supporting the establishment of a septic system management program. The Trinidad Planning Commission and City Council both support the formation of the program. The General Plan, is currently being updated and includes a policy that directs the City to develop this septic system management program. Trinidad is only now developing the program because it is difficult for a City of such a small size to obtain the resources necessary to develop a sound program that meets the City's and its residents needs

### **WHY DOES TRINIDAD NEED THIS PROGRAM?**

Currently, the City of Trinidad is comprised of approximately 200 residences, all of which have individual on-site wastewater treatment systems. The maintenance of these systems is a responsibility that falls on the landowner. A large proportion of the existing on-site wastewater disposal systems are more than 20 years old and were either installed prior to permit requirements or prior to permanent record keeping. It is unknown whether systems in and around Trinidad are being maintained or functioning properly. Maintenance of septic systems is very important because it ensures the system is functioning properly, extends the life of the system and helps prevent system failure. Unfortunately "out of sight, out of mind" describes most peoples relationship with their septic systems and maintenance is often overlooked by homeowners. Failing septic systems pose a huge problem for homeowners and the City as a whole.

Because Trinidad is a small coastal community, negligence affects all residents, as well as ambient water quality. In the past, when cities have had problems with their septic systems, the solution has been to build a sewer system. Due to Trinidad's small size and distance from neighboring communities, development of a centralized wastewater treatment facility is unfeasible. And because of the growth inducing effects of sewer systems, the construction of one is undesirable to residents. It is only now being realized that sewer systems are not always desirable and the regulation of existing systems is more effective and cost efficient and better preserves the character of the town. Only a few cities have already adopted similar programs, but they are becoming more common and will continue to do so because they make sense. Trinidad needs a comprehensive program to regulate all the OWTS within the City limits, ensure and track system maintenance, prevent system failures and monitor water quality.

### **WHY DO I NEED THIS PROGRAM?**

If you had a brand new Mercedes in your driveway, would you drive it 100,000 miles without changing the oil? Would you be careless about the quality of the fuel? Probably not. Like that Mercedes, your septic system is worth a pretty penny, and it will give you years of trouble free service if you maintain it. Maintenance is the single most important consideration in making sure a septic system will work well over a long period of time. Too often homeowners forget that whatever goes down the drain or toilet ultimately either finds its way into the soil or remains in the septic tank until it is pumped out. The most important step in maintaining a septic system is to have the tank pumped regularly. How often a

particular tank needs to be pumped depends largely on the age and size of the tank, the number of people in the household, and the kinds of appliances and amount of water used.

There are two main categories of reasons why maintaining and monitoring systems to avoid system failure is so important. The first category is money and economics. Failing septic systems are expensive to repair or replace, and poor maintenance is a common cause of early system failures. The minimal amount of preventative maintenance that septic systems require costs very little in comparison. For example, it typically costs from \$5,000 to \$20,000 to replace a failing septic system with a new one compared to approximately \$100 to have a septic system inspected, and \$150 to \$250 to have it pumped, depending on the particular system.

There are other monetary reasons to maintain your septic system. Failed septic systems cause property values to significantly decline. This is because of the health and environmental hazards (see below) and because building permits cannot be issued or real estate sales can be delayed for these properties until systems are repaired or replaced and the site is cleaned up. This also affects the economic health of the community as a whole. Failed septic systems are a major source of water pollution in places. They can contribute to pollution of local streams and shorelines that our community uses for commercial or recreational activities, and which attract tourists to Trinidad. The economic health and quality of life of Trinidad would be negatively impacted by a decline in tourism due to pollution from OWTS. Failing systems are also illegal and may cause the state to step in and take corrective actions or take the authority over systems away.

The second and most important reason to maintain your system is to protect the health of your family, your community, and the environment. When septic systems fail, inadequately treated household wastewater is released into the environment. Any contact with untreated human waste can pose significant health risks, and untreated wastewater from failing septic systems can contaminate nearby wells, groundwater, and drinking water sources. Chemicals improperly released through a septic system also can pollute local water sources and can contribute to system failures. For this reason it is important for homeowners to be aware about what should and should not be disposed of through a septic system.

The threat of disease is a key problem with treating human wastewater. The epidemics that killed millions of people in the Middle Ages were caused by mixing of human waste with drinking water supplies. Domestic wastewater may contain bacteria and viruses that cause dysentery, hepatitis, and typhoid fever. Nutrients such as nitrogen and phosphorus, contained in domestic wastewater, can cause both health and nuisance problems if allowed to reach surface or groundwater supplies. Nitrogen in its nitrate form poses the most significant threat to our health. When ingested by infants, nitrate can interfere with the blood's ability to carry oxygen, causing 'blue baby' syndrome.

To protect your health, it is important to exclude these organisms and nutrients from both surface and groundwater. That is why sewage treatment plants use chlorine and other biocides (substances destructive to many organisms). Fortunately, soil and soil bacteria can effectively remove pathogenic (disease-causing) micro-organisms from wastewater treated in a properly functioning septic system.

Informal water testing in the past has indicated that Parker Creek has high fecal coliform counts. This creek has historically been considered as a secondary source of water for Trinidad and has been designated as a "Critical Water Supply Area" in the Draft General Plan. The City would like to develop this creek as a secondary and emergency water supply for the City. Luffenholtz Creek, the City's primary, and currently only, water supply, is located outside the City limits, but the City is working with the County on this program and will request that the County adopt this program's policies in the Luffenholtz Creek watershed.

These reasons are why the City has a responsibility to require OWTS owners to properly maintain their systems, and ensure the conditions of OWTS and water quality are monitored within the City.

### **HOW ARE OWTS REGULATED?**

The State and County have several regulations to help prevent septic systems from causing pollution or presenting a serious public health hazard. The State Health and Safety Code requires an appropriate means of sewage disposal for all homes and businesses. It also prohibits any discharge of sewage on the ground surface. The Health and Safety Code designates the local Health Officer as the person for ensuring proper sewage disposal in each jurisdiction. The Health Officer can delegate these responsibilities to another responsible agency. In Humboldt County, the responsible agency is the Environmental Health Department. Currently, OWTS in Trinidad are permitted by the County.

The Northcoast Regional Water Quality Control Board (Regional Board) is responsible for ensuring that septic systems do not cause pollution of surface or groundwater. The Regional Board has developed many standards for proper septic system installation, including: groundwater separation, stream and well setbacks, slope limitations, minimum system sizing requirements, and allowances for use of alternative technologies. These standards are contained in the Water Quality Control Plan for the North Coast Region (Basin Plan). The Basin Plan delegates permitting and regulating authority to local entities. The City must comply with the minimum standards contained in the Basin Plan in order to keep the authority to permit septic systems.

Another state law has recently passed and been added to the State Water Code that affects the City of Trinidad in relation to septic systems. The Coastal On-site Sewage Treatment System Regulations requires the State Water Quality Control Board to adopt standards and regulations for the permitting and operation of septic systems in coastal areas by 2004. Trinidad's new program is designed to meet or exceed these new requirements. This way, the City is proactive and can regulate septic systems in our own way and in our own time, and only minor modifications may be necessary after 2004.

### **WHAT WILL THE PROGRAM ENTAIL?**

The City's new OWTS management program will establish operating criteria and maintenance standards for all systems in the City. The City Planner and staff and the

## *DRAFT*

Trinidad Planning Commission will write the program in a collaborative effort with input from the public and interested agencies. The details of the program have not yet been finalized. The intent of the program is to ensure that site assessment, system design and construction, operation, maintenance, and environmental monitoring occurs in a way that results in improved quality of life and economic and public health and safety conditions in the Trinidad area.

The draft OWTS ordinance sets up two different permitting systems that regulate OWTS within the City. The first already exists, but is implemented by the County rather than the City. Construction/Repair permits are necessary whenever new systems are installed or repairs are made. The City will adopt the County's Sewage Disposal Regulations that outline design, siting and construction requirements and standards for new and repaired systems, and which conforms to Basin Plan standards. Improper siting, construction, or design often contribute to septic system failures. Fortunately, the proposed program ensures proper siting design and construction of septic systems.

If your septic system has been properly designed, constructed, and installed, then you are the most likely remaining threat to the health and longevity of your septic system. This brings us to the second type of permit found in the draft ordinance, Operating Permits. All system owners will be required to apply for and obtain an operating permit for their OWTS. These permits will be conditional on proper maintenance and subject to a processing fee to cover the administrative costs of the permit system and monitoring.

This program will include inspection and pumping schedules, as part of the conditions of the Operating permit for all on-site wastewater treatment systems within the City limits. Initial inspections will be used to obtain information such as size and location and to assess the condition of the system. This information will be used to develop a reasonable inspection and pumping schedule for each system. Most systems will need to be inspected and pumped approximately every three years. The inspections protect the community from the dangers of failing systems. These permits and regulations will ensure that systems are properly installed and maintained to further the goals of the program and ensure a long life for OWTS.

There will be a monitoring program developed as part of the OWTS maintenance program. It will include water quality monitoring in the creeks that flow through the City limits. Groundwater seeping from the coastal bluffs will also be monitored. System inspections may also include soil testing on the site as a form of monitoring. The City is required to meet certain water quality standards by the Regional Water Quality Control Board, which are contained in the Basin Plan. The City will test for, at a minimum, fecal coliform and nitrates, both of which pose threats to human and environmental health.

The OWTS information will also be used to create a computer Geographic Information System (GIS) database that inventories all relevant information about the systems and helps manage the ongoing program. The database will also include other important parcel related information such as zoning. GIS is a relatively new technology used in many fields, but it is especially useful for land management. It allows integration and analysis of many types of information linked to each parcel and the relationships between parcels. The GIS database will make the City government more efficient and allow it to make better

informed and integrated decisions. Public education and information sharing, possibly via the internet in the future, will also be a component of the program.

## **WHAT DOES THE PROGRAM MEAN TO ME?**

One advantage of the program is that it is not “one size fits all”; maintenance schedules are based on individual site information. Even though the pumping schedule will be tailored to the individual system, other factors affect the condition of an OWTS that the City can't account for. The City will use information such as size and age of the tank and number of bedrooms to develop the pumping schedule. However, the number of people actually living in the house is very important, as is how much water they use and what they put down the drain. Using a lot of water or a garbage disposal or disposing of chemicals down the drain can overload the system. The City won't have this kind of information; that is why periodic inspections are necessary.

A local septic pumper has offered a 20% discount for group rates to carry out the initial inspections, \$100 for an average system including excavation to access it. Trinidad is applying for grant money to help write the program, implement it and help homeowners reduce some of the costs involved. In conjunction with a housing conditions survey of the City, Trinidad is requesting money through the Community Development Block Grant to inspect 50 of the lower income properties at 25% of the cost, or about \$25. Risers and inspection covers will be required by the time of the second inspection. They are relatively cheap (\$15 for the cover and \$30 per foot of riser from just above ground level to tank level) and will save money in the future because no excavation will be necessary to inspect the tank after their installation. These risers can be landscaped and covered with a flower pot or other decoration to hide them.

In-line filters can also be installed to prevent sludge from entering the leachlines and ruining them if it builds up too much. This helps prevent system failure and the resulting ground contamination and costly repairs or replacement of the leachfield. In-line filters will be considered when the City develops the inspection and maintenance schedule, which will allow the required inspections to be less frequent than otherwise. These filters cost from \$200 - \$300, but can save you thousands of dollars in the long-run. Another grant the City is applying for will provide 60% of the cost of some risers and lids and filters and possibly some more inspections. The money will not be enough to cover all residents, so it will be provided on a first come first serve basis when offered.

This program will entail a modest annual added cost to homeowners, however, more money will probably be saved in the future by avoiding costly OWTS failures. Another advantage of the program is that it keeps local control over the City's wastewater treatment. Humboldt County currently permits septic systems in the City of Trinidad; this will change when the Program is implemented. (The City may still contract with the County to be it's Health Officer, but the City will have direct oversight of the process.) Further, if failing septic system pose a threat to water quality or public health and safety, the State could step in and impose measures such as moratoriums on building permits and order reductions in OWTS use. When landowners are educated about the realities of their

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OWTS, worrying about it can cause a headache; this program should give landowners a piece of mind instead.

## **Development of a OWTS Operating Permit Program in the City of Trinidad**

### **WHERE WE'VE BEEN, WHERE WE'RE GOING**

#### **Introduction**

The City of Trinidad is located on the Pacific Ocean, 80 miles south of the Oregon border and 320 miles north of Sacramento. Population is approximately 311 (Census 2000). It is one of California's oldest incorporated cities and one of the smallest in size (0.5 square miles). The City is the first in the State to have an approved Local Coastal Plans from the CA Coastal Commission. The City has a developed public water system but relies on individual Onsite Wastewater Treatment Systems (OWTS).

#### **History: 1970-1990**

The City of Trinidad has been concerned about the Onsite Wastewater Treatment Systems (OWTS), or septic systems, within the City for the last 30 years. Trinidad was subdivided in the 1860's into 8000 s.f. residential lots. As a result the OWTS are at a high density. There are a significant number of systems that are old and unpermitted and that do not meet current standards (e.g. pit systems). This puts the Trinidad area at risk for water quality and public health impacts.

The City of Trinidad, in cooperation with the State Water Resources Control Board, had several studies completed on OWTS and water quality as part of the City's General Plan adoption in the mid-1970's. Poor water quality conditions at the time, including high bacterial counts, indicated the need to manage septic systems or construct a centralized sewer system. The report recommended further study and action on the part of the City. The general consensus in the 1970's was that it is not a matter of "if" systems will fail and cause water quality problems, but "when." Previously, regulators and environmental health professionals assumed that areas like Trinidad would have to eventually build and pay for a centralized sewer treatment plant, because septic systems do eventually fail and their effectiveness decreases with increasing densities. Today however, it is recognized that septic systems can be a viable, long-term wastewater treatment option as long as they are properly constructed, installed, maintained and monitored.

Since the City itself makes up only a small portion of the developed area between Moonstone and Seawood Drive, the County participated with the City in a public meeting process to get community input during the mid-1970's, partially as a result of the above mentioned studies. Although people expressed concerns about septic systems and a desire to study and monitor water quality, they were not ready to actually form a Special District to manage OWTS. The issue then lost momentum and further studies were not completed.

The City's 1978 General Plan addresses septic systems. It notes that a public sewer system is undesirable for the community because of its growth inducing impacts. The General Plan is based on using OWTS as the City's long-term sewage disposal method. Policies require careful study of development proposals to include sewage disposal

capabilities and limits densities and certain types of high impact uses. The 1978 General Plan also recommended a study of the feasibility of a public septic system management program, but the City never completed one.

### **History: 1990-Present**

The issue resurfaced again in the mid-1990's. Several concerns brought this issue back to the forefront. These include continuing concerns over the quality of the bluff seepage, especially onto public beaches, mounting development pressure, especially in terms of second units and vacation rentals and a lack of coordination between the City and the County Health Department. The City was also not being kept abreast of activities relating to septic systems such as repairs and pumpings. On September 21, 1999, the local newspaper published an article that stated that the County Environmental Health Director informed the City Council that the Health Department could not support further development in the City until septic issues were addressed. The County indicated that a central sewer system would be required, and Health Department staff argued that although the City is not yet on the verge of a "septic disaster," it soon could be. They noted that *"lots and lots of communities have shown that eventually the groundwater will be polluted,"* and recommended more intensive water quality monitoring.

This issue then came up at subsequent Planning Commission meetings. The motivating factor for Trinidad to be proactive in dealing with septic systems is that at such high densities, and with older systems in town, septic systems have a tendency to pollute ground and surface waters. If this were to happen, the State could step in and put a moratorium on new development until Trinidad came up with a solution to the water quality problem. This happened in the 1980's to Santa Cruz County. Trinidad must also be extra diligent because of sensitive biological and cultural resources within the City, including the Tsurai Village site and the kelp beds offshore, both of which are officially recognized by the State. Trinidad also has public beaches that need to be protected for recreational use.

A common theme throughout this time span has been the assertion that Trinidad has two options: 1) form a septic management district or some other type of public management program, or 2) to construct a centralized sanitary sewer. Although densities in Trinidad and Westhaven are fairly high for the use of septic systems, the population does not justify the expense of construction of a sewer plant. Not only would it be prohibitively expensive, but the community has resisted this idea because of the growth inducing potential. A central sewer system would allow higher densities and more development in Trinidad and the surrounding area. The City has researched the feasibility of hooking into Humboldt Bay's facilities in McKinleyville, but this option would have the same urbanization type of effects and is also prohibitively expensive.

In 1996 the community, City Council and Planning Commission began discussing a General Plan update. As part of this General Plan update, a series of townhall meetings and community visioning exercises were completed. These meetings were widely advertised in order to promote as broad community participation as possible. The Planning Commission made a strong effort to include representative from all segments

of the community. Over 20% of the City's entire population attended the first meeting alone; many of Trinidad's community groups were also represented. The first meeting was held in October 1997 and was facilitated by the Center for Environmental Economic Development (CEED). One of the major concerns expressed by a large portion of the community at this meeting was the status and management of OWTS in the City. Based on that input, a second Townhall meeting was held in October 1998 focusing on OWTS issues. Several Humboldt County Environmental Health Department staff attended this meeting in order to answer questions from the community; it was a very informative meeting. Finally, a third Townhall meeting was held later in 1998 to identify possible solutions and direction for the community's top three priorities, including septic systems. Several ideas were brainstormed; one of the recurring themes has been the formation of a septic management district or public management program.

The Trinidad Planning Commission and City Council both support the development of an OWTS Management Program. The General Plan that was being updated includes a policy that directs the City to develop this OWTS management program. In 2001, the Planning Commission and planning staff developed a draft OWTS ordinance that would create the basis for a comprehensive OWTS Management Program. Because of budget constraints, the project was put on hold while planning staff applied for grant funding to finish developing and to implement the program (see below). Trinidad is only now developing the program because it is difficult for a City of such a small size to obtain the resources necessary to develop a sound program that meets the City's and its residents needs

In 1998, the City researched County Environmental Health Department and City files for permit information on existing systems. A spreadsheet was created as a result of this research, but the records were incomplete. A survey about individual septic systems was also sent to residents, but the return was low. Some factsheets were prepared and handed out as part of a community education effort; landowner education is an important component of OWTS management. Water quality has been sporadically monitored by Public Works in lower Parker Creek and in runoff from the coastal bluffs, along with regular testing of Luffenholtz Creek, the City's water supply. Bacteriological sampling completed during a past General Plan program indicated that many of the coastal streams and springs in the area had high coliform counts, requiring disinfection for use as potable or recreational water.

Informal and sporadic sampling that has been done in association with individual projects since that time has indicated that the water quality has improved, but this more recent data is not readily available. The County Division of Environmental Health currently regularly samples ocean waters at public beaches near the mouths of creeks to monitor bacteria counts for recreational swimming safety. Monitoring sites near Trinidad include Trinidad State Beach near the mouth of Mill Creek and Luffenholtz Beach near the mouth of Luffenholtz Creek. More information about this monitoring program and the results can be found at:

<http://www.co.humboldt.ca.us/health/envhealth/beachinfo/>. Staff at Streamline Planning Consultants have participated in an annual Statewide volunteer monitoring event known

as snapshot day. Six locations in and around the City were sampled in the Spring of 2003 and 2004 as part of this effort; these include upper and lower Mill Creek, upper and lower Parker Creek, Luffenholtz Creek near the City's water intake and Little River near Crannel. No water quality problems were found. The recent improvements in water quality are likely due to better technology related to OWTS. However, there have been statements from residents in the last five years that smell of sewage is still noticeable from the beaches at times, but no documentation has been submitted.

A more recent concern in consideration of OWTS issues is that the City of Trinidad imports its water from Luffenholtz Creek, approximately two miles to the south. This water is being added to the groundwater aquifer, which may be affecting the treatment capabilities for OWTS. For an area abundant in water resources the City may be considering 'Water Conservation practices' in the near future.

### **Program Development**

Preliminary research has been accomplished by Streamline Planning Consultants (City Planning Department staff) regarding other septic management programs and monitoring programs that could be used as models. An ordinance has been drafted that uses elements and language from several other programs and ordinances. This ordinance will serve as a basis for the program, and it is now ready to go through the public hearing process. The ordinance was compiled using elements from several other ordinances regulating OWTS. Several aspects of the Sea Ranch program and ordinance were used, as was the Santa Cruz County Sewage Disposal code, Georgetown Divide program and the Stinson Beach County Water District Onsite Wastewater Management code. There were also elements taken from the Humboldt County regulations. Much of Trinidad's ordinance was taken from the Town of New Shoreham (Rhode Island) Waste Water Management Ordinance. However, several unique aspects were added to Trinidad's new ordinance in order to best meet the needs of the community. Most of the existing programs were created for larger communities or large private subdivisions and development. Trinidad is a small community with specific needs and goals that were not completely met by any of the above existing programs. Trinidad desires to implement its own program in a manner that best meets the City's needs. Some materials to hand out at public meetings have also been compiled and created.

### **Septic Grants**

The City of Trinidad has recently been awarded two grants (totaling \$134,000) to implement an OWTS Management Program. The City applied for these grants in 2001 and 2002, but it has taken two years for the selection process and contract development to be completed. The City started work under the grants in July 2004.

#### Proposition 13 Coastal Nonpoint Pollution Control Grant Program

The first grant is for a total of \$94,000, and comes from a bond act (Prop. 13) approved by California voters in 2000. This grant is administered through the State Water Resources Control Board (SWRCB) and overseen by the North Coast Regional Water

Quality Control Board (Regional Board). This grant is directed at eliminating nonpoint source pollution (pollution not originating from a discrete source, including septic systems) in coastal areas. The main focus of this grant is to protect near and offshore waters of Trinidad from potential wastewater pollution; it is results driven. Besides developing the OWTS Management Program itself, water quality monitoring is a large component of this grant in order to ensure goals are being met and to assess the program's effectiveness. Another major element of this grant program will be to develop a Geographic Information System (GIS) that will allow the City to assess existing conditions, manage the program and analyze results.

#### National Onsite Demonstration Program for Small Communities (Phase VII)

The second grant, for \$40,000, is funded through the West Virginia University's National Environmental Services Center (NESC) by the Environmental Protection Agency (EPA). This grant is part of the NESC's National Onsite Demonstration Program (NODP) for Small Communities. The focus of this grant is on the process; a demonstration that the type of program Trinidad is implementing will work effectively for other communities. The emphasis of this grant is on developing a program that follows protocol, but is specific to the needs of Trinidad. Another focus of this grant is on public education and public participation. Trinidad's website is being developed as a component of this.